CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER 92 - 082

SITE CLEANUP REQUIREMENTS FOR:

SANTA FE PACIFIC PIPELINE PARTNERS, L.P
CONCORD TERMINAL, CONCORD, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter called the Board, finds that:

Description of Discharger

1. Santa Fe Pacific Pipeline Partners, L.P., (hereinafter called the Discharger) owns and operates a petroleum fuel storage and distribution facility (hereinafter called the Facility), at Concord station in the city of Concord. The Facility currently stores gasoline, diesel fuel, and jet fuel.

Location of Facilities

2. Concord station is a 38 acre Facility located at 1550 Solano Way in the City of Concord. Solano Way is adjacent to the west, Walnut Creek adjoins the east, Imhoff Drive abuts to the south and Tosco Refinery storage facility is to the north.

Lithology

3. The Discharger investigated the lithology of the Facility to a maximum depth of 42 feet below ground surface. Within the 42-foot depth three overlapping strata can be identified as follows:

   a. Fill Zone - This is the uppermost soil layer of the Facility and consists of several feet of well graded material including debris, sand, silt, gravel and clay. Fill thickness is about 6.5 feet in the western section of the site, decreases to 4 feet in the southeast corner of the site and is completely absent in the northeastern portion of the site.

   b. Bay Mud - Bay Mud consists of alluvial clay deposits and underlies the fill zone in most areas of the site. The layer grades from about 15 feet thickness of silty clay material in the southern portion of the site to 1.5 feet thickness of sandy silty clay material in the northern portion of the site.

   c. Clayey Sands - Underlying the Bay Mud is a layer ranging from slightly clayey sands in the eastern portion of the site to well graded gravelly silty clayey sands in the west. Thickness of this layer is as great as 31 feet in the central area of the site and decreases to about 3.5 feet in the southwest, 6 feet in the northeast, 18 feet in the southeast and 11 feet northwest of the facility.

4. The Facility is underlain by the geologic units which include about 50 feet of younger alluvium of the Bay plain (Clay sands), about 200 feet of the Montezuma Formation (Older alluvium) and a bedrock known as the Markley Formation. The Clay Sands and Montezuma Formations are known to be water bearing.

Hydrology

5. The Discharger investigated the shallow (<40 feet) hydrology of the facility. Groundwater elevation is about 14 feet above mean sea level (msl) to the north-east, 10 feet msl to the south and southeast, and 7 feet msl to the west at the Facility. The groundwater flow is generally toward the Imhoff Drive (south) at a gradient of 0.007 ft /ft, Walnut Creek (west) at a gradient of 0.0194 ft/ft and Solano Way (east-northeast) at a gradient of 0.002 ft/ft. Northeast of the facility, groundwater in the immediate vicinity flows toward the trench drain/recovery sump and recovery wells systems installed in that area due to continued extraction of groundwater and free product.

Spill History

6. Between 1985 and 1991, the discharger has reported releases of petroleum in the facility involving petroleum volumes as high as 56,490 gallons. Causes of these events include pipeline rupture or leak and tank overflow or leak. The Discharger has responded and contained the spills. The latest reported release occurred on July 14, 1991, when about 42,420 gallons of diesel fuel were spilled from an overfilled tank (CC-13). Soil and groundwater contamination has occurred at the facility.

Storm Water and Groundwater Discharge Systems

7. Over the years the facility have managed its groundwater and storm water as follows:

   a. For many years, extracted oily groundwater was pumped into an oil/water separator tank. Water is then drawn from the bottom of the separator and discharged through a ditch to an evaporation pond in Tosco Refinery's property.

   b. Presently, water from the oil/water separator is pumped into a holding tank and then passed through an activated carbon filter bed. There are one 1000 lb filter bed in series with two 500 lb filter beds. Water from the filter beds is passed through an air stripper to remove methane. The final effluent from the air stripper is discharged to the Central Contra Costa Sanitation District's waste water treatment plant.

   c. Stormwater from the facility is discharged through two systems. One system discharges to the Walnut Creek through a flood control vault located at the southwestern portion of the facility. The other system is a ditch as mentioned above through which storm water flows to a pond in Tosco Refinery's property.

Groundwater Contamination

8. During the July, 1985, relocation of a buried Pacific Gas & Electric's pipeline, free phase liquid petroleum hydrocarbon was discovered in the excavation at the project site. Subsequently, eleven groundwater monitoring wells (MW-1 through MW-11) and two soil borings (SB-2 and SB-3) were installed in August 1985 at the northeastern portion of the Facility. Wells MW-1 and MW-9 were abandoned in 1986 due to an expansion project at the Facility. The eleven wells were drilled to depths of about 15 feet to 19 feet and monitor groundwater in the Bay Mud and clayey sands. The Discharger's January 20, 1986 "Final Phase I Report Hydrocarbon Evaluation, SPPL Company, Martinez", summarized the depth of water table, thickness of free product discovered, and results of groundwater samples analyzed for contaminants as follows:

   a. Free phase liquid petroleum hydrocarbons were detected in 7 monitoring wells in

thicknesses as high as 3.07 feet in well MW-4 and as low as 0.01 feet in well MW-9. Results of tests (EPA 8015 modified) on free product from six wells show mostly Total Petroleum Hydrocarbon (TPH) as gasoline with concentrations up to 850,000 mg/L and, volatile organics (EPA 8020) with concentrations of benzene up to 93,000 mg/L, toluene up to 130,000 mg/L and xylene up to 140,000 mg/L.

b. Groundwater from seven monitoring wells were sampled and analyzed for contaminants. Concentrations of TPH was as great as 390 mg/L, Benzene up to 26 mg/L, Toluene up 32 mg/L and Xylene up 33 mg/L.

c. Water samples from the extracted groundwater were analyzed. Contaminant concentration levels ranged from 13 mg/L to 20 mg/L for Benzene, 9.3 mg/l to 27 mg/L for Toluene and 14 mg/l to 38 mg/L for Xylene. TPH concentration from one analysis was recorded at 120 mg/L.

9. An additional nine monitoring wells (MW-12 through MW-20) were installed in April 1986 in the northeastern portion of the site. The wells were drilled to depths ranging from 20 feet to 25 feet below ground surface. The Discharger's September 26, 1986 report "Subsurface Hydrocarbon Investigation, SPPL CO., Concord Station", summarized the depth of water table, results of soil and groundwater analysis and the extent of the hydrocarbon plume. Groundwater samples obtained from the 9 new monitoring wells and 2 existing monitoring wells contained:

a. TPH as gasoline with concentration up to 5300 mg/L in MW-17.

b. Volatile organics (EPA method 8020) were as great as 47 mg/L for benzene, 38 mg/L for toluene and 75 mg/l for xylene. The report notes that the free phase hydrocarbon plume extends into northeast and the northwestern portions of the Facility.

10. Groundwater contamination and free product levels were noted in some of the 12 new wells (LF-1 to LF-11 and MW-Tosco) installed in November 1988. The wells were placed mostly in the tank farm area which lays west and south of the Facility to investigate the extent of contamination in the area. The Discharger's May 1989 "Quarterly Report of Hydrogeologic Investigations" summarized the results of soil and groundwater contamination as well as the free product thickness in the new and existing monitoring wells. Some of the groundwater contamination parameters are as follows:

a. Free phase liquid petroleum hydrocarbons were detected in 3 wells in thicknesses as much as 2.14 feet in Well LF-9.

b. Five of the 12 monitoring wells were sampled and analyzed for aromatic hydrocarbons (EPA method 602). Benzene was reported in concentrations as high as 920 ug/L and Toluene as high as 31 ug/L. Ethylbenzene was reported in concentrations as high as 330 ug/L and xylene as high as 280 ug/L. In the existing wells benzene was reported at concentrations as high as 11,000ug/L in well MW-18.

c. TPH as gasoline (EPA method 8015 modified) were reported as high as 11 mg/L.

Soil Contamination

11. During the August 1985 "Phase I investigation" soil samples were collected from four monitoring wells, two soil borings and four composite soil sample. The composite samples were

obtained from a soil stockpile originating from construction excavations during the installation of a trench/groundwater drain system and rerouting of the Pacific Gas & Electric pipelines. Summary of contaminant concentration in the soil samples are as follows:

a. Soil samples taken during well construction were analysed for Total Petroleum Hydrocarbon as gasoline (EPA method 8015 modified) concentration as high as 10 mg/kg at 40 feet depth and 7,000 mg/kg at 6 feet below ground surface were reported.

b. Soil samples taken during well construction were analyzed for volatile organics (EPA method 8020) and, concentrations of benzene was as high as 180 mg/kg at 6 feet depth, toluene was as high as 240 mg/kg at 6 feet depth and, xylene was as high as 280 mg/kg at 6 feet depth was reported.

c. Four composite sample from an aerated soil stockpile were analyzed for Total Petroleum Hydrocarbon as gasoline (EPA method 8015 modified). Up to 17 mg/kg were reported. The stockpile was divided into 12 cells and each of the composite samples is a mixture of three samples from each cell.

12. In the September 1986 "Subsurface Hydrocarbon Investigation" soil samples were collected from 7 monitoring wells and 1 boring at various depths. The total of toluene, benzene and xylene concentrations (EPA Method 5020 and 8020) were as high 640 mg/kg at 16 feet depth and 4800 mg/kg at 11 feet depth.

13. During the November 1988 tank farm soil and groundwater investigation, four soil samples taken from monitoring wells LF-7, LF-8 and LF-9 were analyzed for aromatic hydrocarbon (EPA method 8020) and total hydrocarbon concentrations (EPA method 8015 modified) concentrations as follows

a. Benzene was as high as 1700 ug/kg at 20 feet below ground surface, toluene was as high as 70,000 ug/kg, ethylbenzene was as high as 100,000 ug/kg, xylene was as high as 500,000 ug/kg.

b. Total Petroleum Hydrocarbons as gasoline was as high as 8,500 mg/kg. Total Petroleum Hydrocarbon as diesel concentration was as high as 6,600 mg/kg.

Groundwater Remedial Actions.

14. On October 9, 1985, the Discharger completed the installation of a product/dewatering system adjacent to the Pacific Gas & Electric's pipeline excavation and northeast of the Facility. The system consisted of 60 feet long, 16.5 feet deep and 2 feet wide trench crossed at 90 degrees by another 4 feet wide, 20 feet long and 20 feet deep trench. At the end of the trench a perforated 30 inch diameter casing sump was installed. The entire trench system was gravel filled up to 7 feet below ground surface, back filled to the ground surface with compacted native soil and sloped at 0.05 feet/feet to drain toward the sump. Inside the casing a submersible pump and a product skimmer pump were installed to achieve water table depression and free product removal as follows:

a. The submersible pump is located 15 feet below ground surface and extracts groundwater. Groundwater extraction which causes depression of water table is expected to result in groundwater flow towards the trench. In a study of the dewatering system, the Discharger maintains that groundwater direction has been reversed towards the trench and is capable of lowering and maintaining water table by

two feet. Groundwater recovered was passed through an oil/water separator and stored in a holding tank before discharge through a ditch to an evaporation pond on Tosco Refinery's property. Presently the Facility discharges extracted groundwater to the publically owned treatment works.

b. The product skimmer, located at the free phase fluid surface and product recovery,operates continuously. In a study which compared product thickness before and a after recovery, the Discharger states that the recovery operation has lowered the thickness of free phase by as much as 1 feet to 1.5 feet. Recovered free product is returned to the storage tanks.

15. In December 1987 a thick layer of floating product was observed in Walnut Creek. Walnut Creek is directly adjacent and flows along the western boundary of the Facility. A 66 inch diameter storm drain pipe from the Facility was found to be source. An investigation revealed at least 16 leaky joints on the pipe from which free phase hydrocarbon infiltrated into the drainage pipe. Remedial actions undertaken by the discharger is summarized in the report "Fuel Leak Remediation, SPPL, Inc., March 1, 1988". Cleanup of Walnut Creek and installation of a second French drain/sump system were carried out as follows:

a. Walnut Creek cleanup operations consisted of installation of booms in the creek and berms around the culvert to contain free product. Free product was skimmed from the top while clean water was piped from below surface and discharged back into the creek. The leaky joints on the pipe were sealed and grouted.

b. The discharger installed a drain system to lower the water table below the drain pipe and to recover the floating product. The drain located southwest of the facility consist of 50 feet long, 3 feet wide and 20 feet deep excavation. At the bottom of the excavation an 8 inch slotted pipe was laid along the trench and covered by gravel to within 5 feet below ground surface. A 26 inch diameter pipe sump located at the northern end of the trench collects free product and water which is pumped into a holding tank where oil/water separation takes place. There were no studies to indicate the effectiveness of the drain system.

16. In addition to the sumps, the Discharger currently operates four recovery wells (LF-5, MW-11, LF-9, RW). LF-5, LF-9 and MW-11 were converted from monitoring wells to recovery well. MW-11 and RW are located in the northeastern portion of the site while LF-5 and LF-9 are located in the southern portion of the site.

Soil Remedial Actions

17. Several spills and leaks at the site have resulted in soil contamination. In some of the known cases the Discharger excavated the soil in the impacted area until some residual contaminant concentration is attained. Residual concentration of total petroleum hydrocarbon as diesel using EPA 8015 modified have ranged from 100 mg/kg to 1000 mg/kg. In other cases the impacted soil was not excavated or there were no documentation showing residual concentrations left in place.

18. Excavated soils are initially stockpiled on site pending, disposal or on-site bioremediation. In the past the Discharger biotreated some oily soils from previous spills in an on site treatment unit. In addition contaminated soil from other offsite spill sources is currently imported for on-site bioremediation. Importation and treatment of oily soil in the Facility constitutes an operation of a "Land Treatment Unit" and subject to the requirements of Chapter 15. A waste discharge

permit is needed for the continued operation of the on site bioremediation unit however, the Discharger has indicated their intent to cease operation and proceed with full closure of the unit. If the operation is terminated, a report of waste discharge with sections relating to closure and post closure requirements shall be required.

Groundwater Monitoring

19. Recent groundwater monitoring reports indicate that considerable degree of contamination exists at the site and free product can still be measured in some of the wells. Most of the monitoring wells are not sampled for contaminant analysis on quarterly basis and analysis for contaminants such as metals are not included. Groundwater measurements such as temperature, turbidity, pH, and conductivity was not included in the quarterly monitoring. The current groundwater monitoring system at the Facility requires modification.

Investigations Required

20. More soil and groundwater investigation is needed in the southern and eastern (tank farm) areas of the facility. Due to the earlier leaks and hydrocarbon plume discovered in the north eastern portions of the site, most of the investigation has concentrated in that portion of the site and little has be done to investigate the larger tank farm area.

21. Two short trenches/sump system and about four recovery wells exist on site. The trenches has been in operation for more than four years and should be evaluated to determine their efficiency and ability to recover most of the free phase hydrocarbon still underlying the site. This study should estimate the volume of remaining free phase hydrocarbon and contaminated ground water with view to exploring the possibility of additional projects to speed up cleanup and remedial action at the site.

22. Additional investigations may be required to properly define areas of off site and on site migration of hydrocarbon plume. This investigation may include studies on possible alternatives for stemming the plume migration.

Reference to Regulation

23. All references to Chapter 15 in this Order refers to Chapter 15, Division 3, Title 23 of the California Code of Regulation.

Cost Recovery

24. The Executive Officer has notified the Discharger that pursuant to Sections 25270.9 and 25270.11 of Chapter 6.67, Division 20 of California's Health and Safety Code, the Discharger shall be liable to the extent of the reasonable costs actually incurred in overseeing or contracting for cleanup or abatement efforts. The Discharger has agreed to reimburse the State according to Sections 25270.9 and 25270.11.

25. Pursuant to Section 13304 of the Water Code, the Discharger is hereby notified that the Regional Board is entitled to, and may seek reimbursement (except where reimbursement is provided in the above finding) for, all reasonable costs incurred by the Regional Board to investigate unauthorized discharges of waste and oversee cleanup of such waste, abatement of the effects thereof, or remedial action, required by this Order. Upon receipt of a billing statement for such costs, the discharger shall reimburse the Regional Board.

Basin Plan

26. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986 and amended it on August 19, 1987, July 18, 1989 and December 1991. This Order implements the water quality objectives for the Basin Plan.

Beneficial Uses

27. The existing and potential beneficial uses of the Walnut Creek are:

a. Water contact recreation;
b. Non-contact water recreation;
c. Wildlife Habitat;
d. Preservation of Rare and Endangered Species;
e. Estuarine Habitat;
f. Fish migration and spawning;
g. Industrial service supply;
h. Navigation; and,
i. Commercial and Sport Fishing.

28. The existing and potential beneficial uses of the ground water in the area are:

a. Municipal Supply;
b. Industrial Process and Service Supply; and,
c. Agricultural Supply.

California Environmental Quality Act

29. This action is an Order to enforce the laws and regulations administered by the Board. This action is categorically exempt from the provisions of the CEQA pursuant to Sectuion 15321, Title 14, California Code of Regulations.

Notice and Meeting

30. The Board has notified the Discharger and interested agencies and persons of its intent under California Water Code Section 13304 to prescribe Site Cleanup Requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

31. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code and Section 25270 of the California Health and Safety Code, that the Discharger shall cleanup and abate the effects described in the above findings as follows:

A. Prohibitions

1. The discharge of wastes or hazardous materials in a manner which will degrade water quality or adversely affect the beneficial uses of the waters of the State is prohibited.

2. Further significant migration of pollutants through subsurface transport to waters of the

State is prohibited.

3. Activities which will cause significant adverse migration of pollutants are prohibited.

4. The discharge of contaminated groundwater or recovered free phase liquid petroleum hydrocarbons onto land, into groundwaters or surface waters is prohibited.

B. Specifications

1. The storage, handling, treatment or disposal of soil or ground water containing pollutants shall not create a nuisance as defined in Section 13050(m) of the California Water Code.

2. The Discharger shall conduct free phase liquid petroleum hydrocarbons recovery activities, as approved by the Executive Officer, to remove all pools of free phase liquid petroleum hydrocarbons beneath the Facility.

3. The Discharger shall remediate soil and groundwater contamination, which actually or threatens to degrade water quality or adversely affect the beneficial uses of the waters of the State.

4. The Discharger shall conduct further investigation to determine the extent of hydraulic influence from the Walnut Creek on the groundwater underlying the facility.

5. The Discharger shall investigate the possibility and abate any offsite or on-site migration of contaminated groundwater.

6. The Discharger shall conduct groundwater monitoring according to the Self Monitoring Program attached to this Order or as hereinafter modified by the Executive Officer.

C. Provisions

The Discharger shall comply with the Prohibitions and Specifications above according to the following task and time schedule:

1. Submit a technical report, acceptable to the Executive Officer, relating to the evaluation of the free phase petroleum hydrocarbons and contaminated groundwater recovery system. The report shall include, but not necessarily limited, to the following:

   a. Horizontal and vertical influence of the hydrocarbon recovery systems, estimated volume of hydrocarbon recovered, current schedule of extraction operations and maintenance, estimated volume of free product beneath the Facility and direction of movement of the free phase liquid petroleum hydrocarbons pool or pools beneath the Facility. In addition the report shall include a study on the removal efficiency of the free product recovery well(s), a study on the efficiency of the sump/trench pumping system and a time schedule for removal of all free phase liquid petroleum hydrocarbons beneath the facility.

   b. A report documenting various alternative methods of for enhancing the free product/contaminated groundwater recovery system. The report shall include costs, brief design, location of each suggested alternative and recommended

alternative.

REPORT DUE: No later than October 30, 1992.

2. Submit a technical report, acceptable to the Executive Officer, relating to the contaminated soil and groundwater including, but not necessarily limited, to the following:

   a. A plan for the investigation of horizontal and vertical extent of soil and groundwater contamination in the Facility. The plan shall include proposal to conduct both surface and subsurface soil and groundwater investigation.

      REPORT DUE: No later than December 1, 1992;

   b. Remedial plan for contaminated soil and groundwater. The plan shall include remedial alternatives, time schedule for implementation and suggested remedial option. The Discharger's technical reports under this subparagraph hereof shall include a projection of the cost, effectiveness, benefits, and impact on public health, welfare, and environment of each alternative measure. The plan shall include proposal for soil and groundwater cleanup levels. The reports shall consider the guidance provided by the State Water Resources Control Board's Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California" and California Regional Water Quality Control Board, San Francisco Bay Region's Guidance Document, "Discharge of Polluted Groundwater to Surface Waters, September 1985".

      REPORT DUE: No later than July 1, 1993.

3. Submit a technical report, acceptable to the Executive Officer, relating to the Walnut Creek and, sources of on site / off site migration of contaminants as follows

   a. A plan to study the hydraulic influence of the Facility's groundwater and surface runoff on the Walnut Creek. The plan shall include but not limited to studies on tidal influences, runoff sources to the Walnut Creek and the Facility's impact to the Walnut Creek

   b. A plan to study the extent and sources of offsite/on-site migration of contaminants at the Facility's boundary. The plan shall include groundwater and surface runoff sources. If migration of contaminants exists the Discharger shall include a report on methods of offsite/on-site migration control.

   REPORT DUE: No later than March 1, 1993.

4. Submit a technical report acceptable to the Executive Officer relating to the Land treatment unit (bioremediation unit) as follows:

   a. A closure plan and post closure maintenance plan for the Land Treatment Unit (Bioremediation unit) pursuant to the requirements of Section 2597 of Chapter 15.

   b. If clean closure is not chosen as a closure alternative, the Discharger shall include with this report a plan to comply with the provisions of article 5 of

chapter 15 including the monitoring requirements and an evidence of financial assurance.

REPORT DUE: No later than March 1, 1993.

5. The Discharger is required to reimburse the State for all reasonable costs of the State incurred in overseeing or contracting for cleanup or abatement efforts.

6. The Discharger shall maintain a copy of this order at the project field office so as to be available at all times to project personnel.

7. Technical reports, submitted by the Discharger, in compliance with the Prohibitions, Specifications, and Provisions of this Order shall be submitted to the Board on the schedule specified herein. These reports shall consist of a letter report that includes the following:

   a. A summary of work completed since submittal of the previous report and work projected to be completed by the time of the next report;

   b. Identification of any obstacles which may threaten compliance with the schedule of this Order and what actions are being taken to overcome these obstacles;

   c. In the event of non-compliance with any Prohibition, Specification or Provision of this Order, written notification which clarifies the reasons for non-compliance and which proposes specific measures and a schedule to achieve compliance. This written notification shall identify work not completed that was projected for completion, and shall identify the impact of non-compliance on achieving compliance with the remaining requirements of this Order; and,

   d. In the first self-monitoring report, an evaluation of the current groundwater monitoring system and a proposal for modifications as appropriate.

8. All submittals of hydrogeological plans, specifications, reports, and documents (except quarterly progress and self-monitoring reports), shall be signed by and stamped with the seal of a registered geologist, registered engineering geologist, or registered professional engineer.

9. All samples shall be analyzed by State certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Board review.

10. The Discharger shall maintain in good working order, and operate as efficiently as possible, any facility or control system installed to achieve compliance with the requirements of this Order.

11. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order, submitted by the Discharger, shall also be provided to the following agencies:

   a. City of Concord, Planning Department;

b. Contra Costa County Health Department; and,
c. California Environmental Protection Agency, Department of Toxic Substances Control.

12. The Discharger shall permit the Board or its authorized representative, in accordance with Section 13267 (c) of the California Water Code, the following:

a. Entry upon premises in which any pollution sources exist, or may potentially exist, or in which any required records are kept, which are relevant to this Order;

b. Access to copy all records required to be kept under the terms and conditions of this Order;

c. Inspection of any monitoring equipment or methodology implemented in response to this Order; and,

d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the Discharger.

13. The Discharger shall file with this Board a report of any material change or proposed change in the character, location, or quantity of this waste discharge. For the purpose of these requirements, this includes any proposed change in the boundaries, contours, or ownership of the disposal areas.

14. The Board considers the property owner and site operator to have a continuing responsibility for correcting any problems within their reasonable control which arise in the future as a result of this waste discharge or water applied to this property during subsequent use of the land for other purposes.

15. These requirements do not authorize the commission of any act causing injury to the property of another or of the public, do not convey any property rights, do not remove liability under federal, state or local laws, and do not authorize the discharge of waste without the appropriate federal, state or local permits, authorizations, or determinations.

16. If any hazardous substance, extracted groundwater or petroleum hydrocarbon is discharged in or on any waters of the state, or discharged and deposited, or probably will be discharged in or on any waters of the state, the Discharger shall

a. Report such discharge to the following:

(1) This Regional Board at (510) 464-1255 on weekdays during office hours from 8 a.m. to 5 p.m.; and,

(2) The Office of Emergency Services at (800) 852-7550.

b. A written report shall be filed with the Regional Board within five working days and shall contain information relative to the following:

(1) The nature of waste or pollutant;

(2) The quantity involved and the duration of incident;
(3) The cause of spill;
(4) The estimated size of affected area;
(5) The corrective measures that have been taken or planned, and a schedule of these measures; and,
(6) The persons/agencies notified.

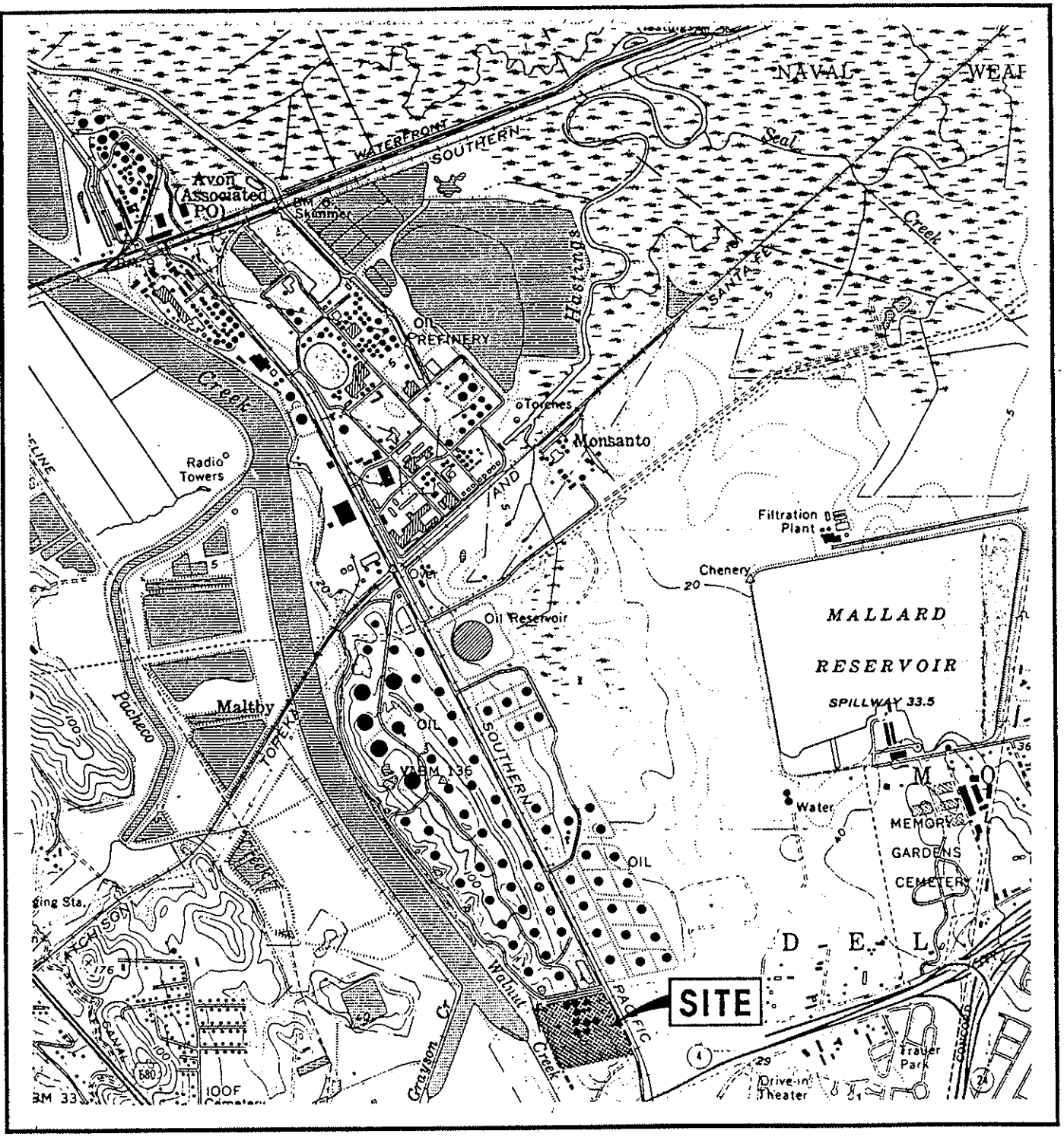
17. The Board will review this Order periodically and may revise the requirements when necessary.

18. If the Discharger is delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the Discharger shall promptly notify the Executive Officer and the Board shall consider revision to this Order.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on July 15, 1992.

Steven R. Ritchie
Executive Officer

Attachments:
Figure 1: Site Location Map
Self Monitoring Program



SPPL

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0 1/2 1 Mile

MAP SOURCE:
U.S.G.S. Vine Hill, California
7.5' Quadrangle
1980

Figure 1 : SITE LOCATION MAP

Project No. 1769

LEVINE•FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

SANTA FE PACIFIC PIPELINE PARTNERS, L.P.

CONCORD TERMINAL

1550 SOLANO WAY

CONCORD, CONTRA COSTA COUNTY

SITE CLEANUP REQUIREMENTS
ORDER NO. 92-082

CONSISTS OF

PART A

AND

PART B

PART A

A. General

1. Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No.73-16.

2. The principal purposes of a self-monitoring program by a waste discharger are the following:

   a. To document compliance with Site Cleanup Requirements and prohibitions established by the Board;

   b. To facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge;

   c. To develop or assist in the development of standards of performance, toxicity standards and other standards; and,

   d. To prepare water and wastewater quality inventories.

B. Sampling and Analytical Methods

1. Sample collection, storage, and analyses shall be performed according to the most recent version of Standard Methods for the Analysis of Wastewater, and Test Methods for Evaluating Solid Waste EPA Document SW-846, or other EPA approved methods and in accordance with an approved sampling and analysis plan.

2. Water and waste analysis (except total suspended solids) shall be performed by a laboratory approved for these analyses by the State Department of Health. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

3. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. Definition of Terms

1. A grab sample is a discrete sample collected at any time.

2. Duly authorized representative is a duly authorized representative may thus be either a named individual or any individual occupying a named position such as the following:

   a. Authorization is made in writing by a principal executive officer; or,

   b. Authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as general

partner in a partnership, sole proprietor in a sole proprietorship, the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company.

D. Schedule Of Sampling, Analysis, And Observations

1. The Discharger is required to perform sampling, analysis, and observations according to the schedule specified in Part B and the requirements in Article 5 of Chapter 15.

2. A statistical analysis shall be performed and reported annually as described in Article 5 of Chapter 15.

E. Records To Be Maintained By The Discharger

1. Written reports shall be maintained by the Discharger for groundwater monitoring and wastewater sampling, and shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board. Such records shall show the following for each sample:

   a. Identity of sample and sample station number;
   b. Date and time of sampling;
   c. Method of composite sampling (See Section C-Definition of Terms);
   d. Date and time that analyses are started and completed, and name of the personnel performing the analyses;
   e. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used. A reference to a specific section of a reference required in Part A Section B is satisfactory;
   f. Calculation of results;
   g. Results of analyses, and detection limits for each analyses; and,
   h. Chain of custody forms for each sample.

F. Reports To Be Filed With The Board

1. Ground water monitoring results shall be filed monthly until the schedule allows quarterly samples, then reports shall be quarterly. Written self-monitoring reports shall be filed no later than 45 calendar days following the end of the report period. In addition an annual report shall be filed as indicated. The reports shall be comprised of the following:

   a. Letter of Transmittal - A letter transmitting the essential points in each self-monitoring report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations, such as, operation and/or facilities modifications. If the Discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred in the last report period this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice

president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct. The letter shall contain the following certification:

"I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

b. Each monitoring report shall include a compliance evaluation summary sheet. Until the Order's amended to specify ground water protection standards, the following shall apply and the compliance sheet shall contain:

   i. The method and time of water level measurement, the type of pump used for purging, pump placement in the well, method of purging, pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity during purging, calibration of the field equipment, results of the pH, temperature conductivity and turbidity testing, well recovery time, and method of disposing of the purge water; and,

   ii. Type of pump used, pump placement for sampling, a detailed description of the sampling procedure; number and description of equipment, field and travel blanks; number and description of duplicate samples; type of sample containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations; the chain of custody record.

c. A summary of the status of any remediation work performed during the reporting period. This shall be a brief and concise summary of the work initiated and completed as follows:

   i. As interim corrective action measures; and,

   ii. To define the extent and rate of migrations of waste constituents in the soil and ground water at the site.

d. The Discharger shall describe, in the quarterly report, the reasons for significant increases in a pollutant concentration at a well on site. The description shall include the following:

   i. The source of the increase;

ii. How the Discharger determined or will investigate the source of the increase; and,

iii. What source removal measures have been completed or will be proposed.

e. A map or aerial photograph showing observation and monitoring station locations, and plume contours for each chemical in each aquifer shall be included as part of the quarterly Self-Monitoring Report.

f. Laboratory statements of results of analyses specified in Part B must be included in each report. The director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board. The following information shall be provided:

i. The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods of analyses must be identified. If methods other than EPA approved methods or Standard Methods are used, the exact methodology must be submitted for review; and,

ii. In addition to the results of the analyses, laboratory quality control/quality assurance (QA/QC) information must be included in the monitoring report. The laboratory QA/QC information should include the method, equipment and analytical detection limits; the recovery rates; an explanation for any recovery rate that is less than 80%; the results of equipment and method blanks; the results of spiked and surrogate samples; the frequency of quality control analysis; and the name and qualifications of the person(s) performing the analyses.

g. By January 31 of each year the Discharger shall submit an annual report to the Board covering the previous calendar year. This report shall contain:

i. Tabular and graphical summaries of the monitoring data obtained during the previous year;

ii. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the Site Cleanup Requirements; and,

iii. A written summary of the ground water analyses indicating any change in the quality of the ground water.

G. In the event the Discharger violates or threatens to violate the conditions of the Site Cleanup Requirements and prohibitions or intends to experience a plant bypass or treatment unit bypass due to:

1. Maintenance work, power failures, or breakdown of waste treatment equipment, or;
2. Accidents caused by human error or negligence, or;

3. Other causes, such as acts of nature.

The Discharger shall notify the Regional Board office by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within 7 working days of the telephone notification. The written report shall include time and date, duration and estimated volume of waste bypassed, method used in estimating volume and person notified of the incident. The report shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps were taken to prevent the problem from recurring.

In addition, the waste Discharger shall promptly accelerate his monitoring program to analyze the discharge at least once every day. Such daily analyses shall continue until such time as the effluent limits or containment have been attained, until bypassing stops or until such time as the Executive Officer determines to be appropriate. The results of such monitoring shall be included in the regular Self-Monitoring Report.

Part B

A. Description Of Observation Stations And Schedule Of Observations

1. The observation stations shall consist of 30 existing groundwater monitoring and recovery wells (MW-2 to MW-20, RW and LF-1 to LF-11), 2 sumps and any groundwater monitoring wells installed in a future soil and groundwater characterization, remedial work or the evaluation of remedial work.

2. The schedule of well observations and grab sampling shall be conducted quarterly and within the months of January, April, July and October.

B. Observations and Test Procedures

1. The groundwater well observations shall consist of the following:

   a. Water elevation reported to the nearest 0.1 inch for both depth to water from the ground surface and the elevation of the ground water level;

   b. Groundwater temperature measured at the time of sampling and reported in degrees Fahrenheit;

   c. Groundwater conductivity measured at the time of sampling as per Standard Methods 205 using potentiometric methodology;

   d. Groundwater pH measured at the time of sampling as per Standard Methods 423 using potentiometric methodology; and,

   e. Groundwater turbidity measured at the time of sampling.

   f. Free phase petroleum product thickness measured using EPA approved methods.

2. The test procedures for the groundwater samples and soil samples shall be as described herein. The following section shall not apply to groundwater samples taken from wells with more than a 0.1 inch thickness of free phase petroleum hydrocarbon:

   a. Volatile aromatic compound analysis using the EPA Method 5030/8020;

   b. Total Petroleum Hydrocarbons (TPH) and Fuel Hydrocarbons using the EPA Method 5030/8015 (Modified). Analysis shall include TPH as Total Diesel and Gasoline;

   c. Total Oil and Grease using Standard Methods 418.1, infrared analysis;

3. Quarterly reports to be filed pursuant to Part A of this Self Monitoring Program shall include a map showing the limit of groundwater contamination, direction of movement and concentration of contamination; and,

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program is as follows:

1. Developed in accordance with the procedures set forth in this Board's Resolution No. 73-16;

2. Effective on the date shown below; and,

3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer, or request from the Discharger.

Steven R. Ritchie
Executive Officer

July 15, 1992
Date Ordered